

REMARKS

Claims 4-7 and 11-18 are pending in the present case. Claims 4, 5, 11 and 12 are independent claims. By this amendment, claims 7, 14, 16 and 18 are amended for clarity.

Reconsideration in view of the above amendments and following remarks is respectfully solicited.

Allowable Subject Matter

Applicants note with appreciation the indication on page 6 of the Office Action that claims 7, 14, 16 and 18 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicants respectfully submit that this is not necessary in view of the following remarks.

The Claim Objections Are Obviated

The Office Action objects to claims 7, 14, 16 and 18 for minor informalities contained therein. This objection is respectfully traversed.

Applicants respectfully submit that the amendment to claims 7, 14, 16 and 18 obviates the objection of the claims.

Accordingly, withdrawal of the objection to claims 7, 14, 16 and 18 is respectfully solicited.

The Claims Define Patentable Subject Matter

The Office Action rejects:

Claims 4-6, 11-13, 15 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,112,070 to Katsuyama et al. (hereafter Katsuyama) in view of Humphries et al. (Industrial electronics, Breton Publishers, 1983, chapter 2, page 38) (hereafter Humphries) and further in view of applicants' admitted prior art.

This rejection is respectfully traversed.

Applicants respectfully submit that the claimed invention is distinguishable from the combination of Katsuyama, Humphries and APA for at least the following reasons:

For example, the Examiner concedes that Katsuyama and Humphries fail to disclose a combination amplification and isolation amplifier. (see Office Action, page 4). However, in an attempt to show this feature, the Examiner imports APA.

Specifically, the Examiner alleges that APA discloses that a person skilled in the art is well aware of "back talk" problems and the solution for such a problem is inserting a combination of amplification and isolation amplifier between the mixer and the input terminal. (see Office Action, pages 4-5). Applicants respectfully disagree with this allegation.

For example, applicants submit that a close review of applicants' APA in paragraphs [0006] - [0008] of the present specification merely reveals that a conventional double-

conversion tuner apparatus includes a high-frequency amplifier 12 and an isolation amplifier A.

In other words, applicants' APA apparatus includes a separate high-frequency amplifier 12 and a separate isolation amplifier A, instead of a single device which acts both as an amplification and isolation amplifier, as claimed in the present invention.

Furthermore, applicants' APA teaches away from using an isolation amplifier because as recited in paragraph [0008] it is expressly stated that in the double-conversion tuner apparatus shown in Fig. 10A, the addition of the isolation amplifier A disadvantageously increases costs and degrades distortion characteristics. (see present specification, pages 2-3).

As such, applicants submit that the Examiner has not only failed to provide proper motivation for taking applicants' APA isolation amplifier A and attempting to combine it with the apparatus of Katsuyama, but has also introduced art which teaches away from such a combination because applicants' APA specifically teaches away from using an isolation amplifier.

Applicants respectfully point out to the Examiner that a *prima facie* case of obviousness is rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

In other words, it is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicants respectfully submit that the combination of cited references is improper because at least APA clearly teaches away from such a combination.

As such, applicants respectfully submit that independent claims 4, 5, 11 and 12 are allowable over the improper combination of references, for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 4-6, 11-13, 15 and 17 under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

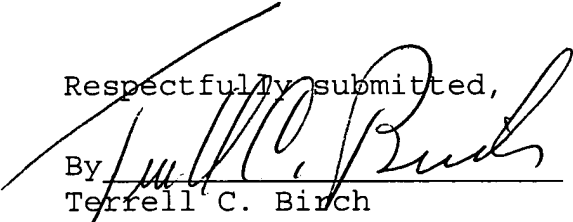
In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a Personal Interview.**

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

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Respectfully submitted,

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